

REMARKS

Applicants thank the Examiner for his careful review and the withdrawal of the previous rejections. Applicants note that both the previous "use" rejection and art rejection based on Kahlbaugh et al. have been withdrawn. Applicants note that the Examiner, upon further consideration, has instituted new grounds of rejection over the Kahlbaugh et al. reference, which has been the primary reference throughout the prosecution of the above-captioned United States patent application.

In response to the Examiner's comments about Applicants' previous position, Applicants will only briefly restate the view that the Kahlbaugh et al. reference is a unique filter structure different in theory and structure than the structure claimed by Applicants in this application. The Kahlbaugh et al. structure is made by obtaining repeated layers of fine fiber separated by repeated layers of a separation media and that its filtration capacity results from the addition of fine fiber layers with a separation media acting as a storage layer and not as an active filtration layer. Accordingly, Applicants do not acquiesce in the Examiner's position stated in paragraph 1.

Applicants note the Examiner's reliance on the concept of "inherency" on page 4 in the last sentence of paragraph 1. The concept of inherency has no place in an obviousness rejection. Applicants do not acquiesce in the position that the Examiner has taken that these functions are inherent in Kahlbaugh et al. Indeed, Applicants believe the Kahlbaugh et al. structure is conceptually and structurally different than the claimed structures and one of ordinary skill in the art would not modify Kahlbaugh et al. to obtain the claimed materials.

In paragraphs 2 and 3 of the Examiner's Action, the Examiner rejects claims 1-3 and 5-10 under 35 U.S.C. § 103(a) over Kahlbaugh et al. In large part, the Examiner restates the previous rejections. The Examiner should note that claim 1 has been amended to recite an efficiency in the substrate layer greater than the efficiency taught by Kahlbaugh et al. The Examiner argues that the efficiency in Kahlbaugh et al. is up to about 10%. Applicants respectfully traverse the rejection.

Applicants disagree with the view that the efficiency in Kahlbaugh et al. is up to about 10% and disagree with the view that the Kahlbaugh reference is one that would be considered analogous to the invention, however, in an attempt promote the status of this application, Applicants have amended the claim to recite that the application has a claimed efficiency greater

than that shown in Kahlbaugh et al. This level of efficiency is not obvious since this layer in Kahlbaugh is not designed to be an active filtration layer and in actual applications of the Kahlbaugh technology, the efficiency of this layer would be far less than 10%. Support for this amendment is found in the application at page 5, lines 9-16; page 6, lines 25-29; page 24, line 29 through page 25, line 9 and inherently in the substrate materials disclosed in the application.

Applicants assert that this amendment differentiates claim 1 and all claims dependent on claim 1. The Examiner should note that claims 2 and 3 have been additionally amended to recite that the substrate layer has an efficiency layer greater than 20% and that the efficiencies of the fine fiber layers have different values. This amendment is supported by page 5, lines 9-16. Applicants assert that claims 2 and 3 are clearly patentable over the Kahlbaugh et al. reference. On the whole, the Kahlbaugh et al. reference shows, as the Examiner has stated, efficiencies of substantially less than 10% and essentially equivalent substrate layers. Selecting this structure would not be obvious in view of the teachings of Kahlbaugh et al.

The Examiner states that:

...to adjust the average pore size between fibers in the web to about 0.0001 to 5 microns to provide a layer having a desired efficiency and lifetime for a given application.
is obvious.

Applicants take strong issue with this statement. The Kahlbaugh et al. reference shows that the desired efficiency and lifetime for a given application is obtained in structures created in a designed experiment by creating multiple layers of fine fiber are layered with multiple layers of separation media. Kahlbaugh et al. taken as a whole suggest, opposite to the claimed invention, that adding layers improves performance not pore size adjustment.

Regarding the porosity of the fine fiber layers, Applicants are not required to show the criticality of these ranges since the Kahlbaugh et al reference relates to a different design mode than is claimed.

Applicants assert that the balance of the dependent claims is allowable since the claims are based on an allowable independent claim.

In paragraph 4 of the Examiner's Action, the Examiner rejects claims 11-13, 15-20 and 22-24 under 35 U.S.C. § 103(a) over Kahlbaugh et al. These are method claims that are similar to the independent filter claims discussed above. Applicants have made similar amendments to these claims and assert that independent claim 11 and claims dependent thereto are also

patentable for the same reasons that claim 1-10 are allowable. Applicants request that the Examiner pass these claims to allowability.

In paragraph 5, the Examiner has rejected claims 25-27 and 29-35 under 35 U.S.C. §103(a) over Kahlbaugh et al. These claims relate to a specific embodiment of the claim structure. Applicants respectfully traverse.

The claims as amended recite that the claims cover a structure having only a single substrate layer in contact with three or more layers of fine fiber. This structural motif is entirely different than that any as explained by the Examiner. Applicants agree with the Examiner that Kahlbaugh et al. primarily teaches one of two modes; either stacking a structure comprising a layer of fine fiber followed by a layer of separation media followed by a layer of fine fiber until a sufficient efficiency is obtained or by stacking a substrate bearing two opposing layers of fine fiber in a stack with multiple similar layers. As a result, Applicants assert that a minimum structure from Kahlbaugh et al. would contain either:

- (1) multiple substrate layers and approximately equal numbers of layers of fine fiber and separation media; or
- (2) approximately two or more substrate layers with four or more fine fiber layers.

Both of these Kahlbaugh et al. motifs are strikingly different than the simple structure claimed having a single layer of separation media and three layers of fine fiber. One of ordinary skill in the art would not modify the Kahlbaugh et al. structures as suggested by the Examiner, since it is the entire purpose of the Kahlbaugh et al. disclosure to obtain multiple layers of fine fiber and multiple layers of separation media to obtain the required efficiency. Applicants, on the other hand, combine a single filtration substrate having substantial filtration properties with three or more layers of fine fiber to obtain high efficiency. This design motif is sharply different.

Applicants have added additional claims 36-45. Applicants assert that these claims having a substrate with an efficiency greater than 20% is unobvious, since even as broadly construed as Kahlbaugh et al. has been by the Examiner, Kahlbaugh et al. cannot teach a substrate greater than 10 % in efficiency. Applicants assert that all claims 36-45 are allowable as written and request the Examiner to pass them to allowance.

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution

of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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Date

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